TECHNICAL SERVICES DIVISION

INDEPENDENT ASSURANCE SAMPLING AND TESTING MANUAL

DECEMBER 1987

NEW YORK STATE DEPARTMENT OF TRANSPORTATION

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TECHNICAL SERVICES DIVISION

INDEPENDENT ASSURANCE SAMPLING AND TESTING

PROCEDURE MANUAL

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INDEPENDENT ASSURANCE SAMPLING AND TESTING PROCEDURE MANUAL

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NEW YORK STATE DEPARTMENT OF TRANSPORTATION
TECHNICAL SERVICES DIVISION

INDEPENDENT ASSURANCE SAMPLING AND TESTING PROCEDURE MANUAL

INTRODUCTION

This manual prescribes the procedures to be followed for Independent Assurance Sampling and Testing (IAST) formerly known as the Record Sampling and Testing Program. The outlined procedures are those to be used by IAST personnel in observing and checking the acceptance sampling and testing of materials performed by Department inspectors on major construction projects.

Independent assurance sampling and testing is mandated by the Federal Highway Administration (FHPM 6-4-2-7, Sampling and Testing of Materials and Construction). The FHPM requires that each state have an independent assurance sampling and testing program which provides the following:

(1) The point in the construction process at which sampling and testing is to be done.

(2) A guide schedule for sampling and testing materials which will give general guidance to personnel responsible for the program yet give them reasonable latitude for adaptation to specific project needs.

(3) A reasonable portion of the independent assurance sampling and testing be performed by personnel who have no direct responsibility for acceptance sampling and testing using test equipment other than that assigned to the project. The program may permit the remainder of the independent samples and tests to be accomplished by independent observation of the acceptance sampling and testing or with the use of project assigned equipment.

(4) A prompt comparison of acceptance test results with independent assurance test results.

This manual outlines the procedures which will assure that the goals of the FHPM are met. It also supersedes the Record Sampling and Testing Program manual issued in September, 1971 and any supplements issued subsequently addending it.

All personnel involved in independent assurance sampling and testing must become familiar with the contents of this manual. The manual is divided into three sections as follows:

SECTION ONE - GENERAL PROCEDURES
SECTION TWO - SAMPLING AND TESTING PROCEDURES
SECTION THREE - REPORTS AND RECORDS

SECTION ONE - GENERAL PROCEDURES

I. SCOPE

This section covers the general procedures for Independent Assurance Sampling and Testing (IAST).

II. GENERAL

IAST is intended to provide an independent check on the quality of the sampling and testing of construction materials. This independent cross-check of normal procedures and equipment shall be accomplished by having Department personnel, other than those engaged in normal project inspection, observe the sampling and testing techniques, perform independent tests and compare the test results.

IAST personnel shall take samples at the same location and time, or use a portion of a split sample taken by the inspector being evaluated.

Test results of IAST samples are not compared to the specifications. The procedures and equipment used by the inspector in sampling and testing are observed and the results of the test done by the inspector are compared to the results obtained by the IAST personnel.

Sampling and testing shall be conducted on all capital highway projects, or at sources and plants supplying concrete, bituminous concrete and granular material to these projects. This program does not include maintenance, canal or special work such as landscaping, lighting, fencing, demolition, signal, signs, bridge painting and tree removal.

Samples shall be tested by IAST personnel at the site or returned to the Regional laboratory for testing. In general, IAST tests shall be conducted utilizing equipment provided for this program. In some instances, the IAST equipment will be supplemented by equipment in the field, the plant or Regional laboratories.

Standard procedures as prescribed in this manual shall be used for the recording, reporting and filing of test results.

Although the IAST is a Technical Services Division program, questions and requests for clarification or assistance originating in the Regions, shall be directed to the Director, Materials Bureau, Albany, who has administrative responsibility for this program.

III. SAMPLING AND TESTING

A. Items

The following is a summary of construction materials for which the sampling and testing will be checked:

MATERIALS	TESTS	LOCATION
1. Structural Concrete	Slump, Air, Cylinders	Project
2. Pavement Concrete	Slump, Air	Project
3. Concrete Aggregates	Gradation	Plant
4. Bituminous Concrete	Aggregate Gradation	Plant
5. Liquid Bituminous Materials	Take sample only	Project and Plant
6. Granular Materials including Subbase	Gradation, density where applicable	Project and Source
7. Embankment Material	Density	Project

B. Equipment

Each Region shall have specially assigned vehicles for use in the independent sampling and testing program. These vehicles shall carry test equipment, appropriate for the test(s) to be performed, provided by the Technical Services Division. A detailed list of equipment is contained in Appendix A to this manual.

Each Region shall designate an individual who will be responsible for the security and maintenance of this equipment. All equipment issued for this program shall be kept intact and not utilized for acceptance testing at projects or plants.

The Technical Services Division will have items of expendable equipment and repair parts on hand for resupply and repair purposes. Equipment requests shall be made to the Materials Bureau or Soil Mechanics Bureau through normal channels for the respective program areas.

Office supplies and all necessary forms may be obtained by the Regions through normal channels.

C. Scheduling

An individual designated as the TAST supervisor is responsible for scheduling visits to each project and plant site at the prescribed rate, but at least once a year. The first visit to each plant or project should occur as close to the start up of the project or plant as possible. The frequency of sampling and testing is prescribed for each material on a unit basis (e.g. one per 100 c.y. etc.). Due to

practical considerations, these frequencies shall be considered a guide and it is expected that sampling rates may vary. The recommended frequency for each material is in Appendix B. In regards to granular material sampling, the IAST supervisor will have to consult with the Regional Soils Engineer for scheduling.

Schedules and records of sampling and testing shall be maintained in the Regional Offices and these records will be subject to review by the Technical Services and Construction Divisions.

SECTION TWO - SAMPLING AND TESTING PROCEDURES

I. GENERAL PROCEDURE

IAST personnel shall be provided with a schedule far enough in advance of their work in order to avoid wasted time. The IAST supervisor will maintain a record of which inspectors have been observed and attempt to schedule as many different plant and project inspectors as possible.

The IAST personnel shall evaluate the inspector's sampling technique and equipment and note any deviation from the Materials or Soils Method or equipment deficiencies. The sample taken by the inspector should be large enough so that it can be split. The inspector tests one half of the split sample and the IAST personnel tests the other half of the sample. The results of the tests are then compared by the IAST supervisor to assure that the two tests results are within acceptable variations. Acceptable variations are given in Appendix G.

The IAST personnel shall immediately correct any deviation from the Materials or Soils Method's procedure in sampling or testing. If there is a significant difference in the test results, the IAST supervisor shall investigate to find the cause.

II. DETAILED PROCEDURES

The tests shall be performed for each project, source or plant, according to the appropriate Materials or Soils Method as follows:

A. Portland Cement Concrete - Structures

1. Slump - MM 9.2
2. Air Content - MM 9.2
3. Cylinders - MM 9.2

B. Portland Cement Concrete - Pavements

1. Slump - MM 9.2
2. Air Content - MM 9.2

C. Concrete Aggregates

1. Coarse Aggregate Gradation - MM 9.1
2. Fine Aggregate Gradation - MM 9.1

D. Bituminous Concrete

1. Hot Bin Analysis - MM 5 (Batch Plant)
2. Composite Aggregate Gradation - MM 5 (Drum Mix Plant)

E. Liquid Bituminous Materials

1. Asphalt Cements - MM 8.1
2. Asphalt Emulsions - MM 8.2

F. Granular Materials

1. Sampling - SCP-8
2. Grain Size Analysis - STM-2
3. Field Compaction Test - STM-6, 9 or 10 (IAST personnel use same method as project inspector).

G. Embankment Material

1. Field Compaction Test - STM-6, 9 or 10 (IAST personnel use same method as project inspector).

SECTION THREE - REPORTS AND RECORDS

I. GENERAL

A. Material Items

A report will be prepared each time the IAST personnel visits a project or plant. BR-249b shall be used for visits to "plant" sites; BR-250a shall be used for visits to "project" sites. Each form is provided in a set with four (4) different colored copies with carbon paper between each copy and has a control number imprinted on it that serves as exact identification. This number shall be referred to in all correspondence concerning the IAST personnel's visit to a particular project or plant.

The following distribution is made of the completed forms BR-249b or BR-250a:

COPY	COLOR	DESTINATION	REMARKS
1	White	Materials Bureau	Forwarded to the Materials Bureau and placed in the Technical Services files.
2	Yellow	Regional Director	Reviewed by the Regional Director and filed with the Regional Materials Engineer.
3	Pink	IAST personnel	Filed at the Regional Office by the supervisor of the IAST personnel.
4	Gold	Project Engineer or Plant Inspector	Filed with the project or plant records.

Instructions for completing the forms are discussed in the following paragraphs.

Only one test result is to be recorded on any one form. Each of the following shall be considered as one test:

1. Portland cement concrete - slump, air and cylinders.
2. Bituminous concrete - aggregate gradation.
3. Portland cement concrete gradation - coarse and fine aggregates.
4. Miscellaneous tests.

Internal filing and distribution procedures shall be as established in each Region. The copies for the Materials Bureau can be collected on a weekly basis by the IAST supervisor and sent in one mailing.

The results of the tests or sampling information are the only items reported on Form BR-249b or BR-250a. For several tests, it is necessary to record raw data and make computations in order to obtain the final results. This will be accomplished by utilizing the normal forms required for these tests (e.g. Form BR-161 - Hot Bin Analysis). Appendix C contains a list of all forms required for this program. The test forms, when used, shall be attached to the IAST personnel's copy of the Form BR-249b or BR-250a and filed in the Regional Office in a permanent file.

Project Engineers and Plant Inspectors will maintain a separate file for their copies of Form BR-249b or BR-250a.

B. Soil Items

A report will be prepared each time the IAST personnel visits a project or source. SM-464 shall be used for visits to both projects and sources. Each form is provided in a set with four (4) different colored copies with carbon paper between each copy and has a control number imprinted on it that serves as exact identification. This number shall be referred to in all correspondence concerning the IAST personnel's visit to a particular project or source.

The following distribution is made of the completed form SM-464:

COPY	COLOR	DESTINATION	REMARKS
1	White	Soil Mechanics Bureau	Forwarded to the Soil Mechanics Bureau and placed in the Technical Services files.
2	Blue	Regional Director	Reviewed by the Regional Director and filed with the Regional Soils Engineer.
3	Green	IAST personnel	Filed at the Regional Office by the supervisor of the IAST personnel.
4	Yellow	NYSDOT Engineer-In-Charge (EIC)	Filed with the project records.

Instructions for completing the form are discussed in the following paragraphs.

Only one test result is to be recorded on any one form.

1. Grain Size Analysis - project or source.
2. Field Compaction Test - project.

Internal filing and distribution procedures shall be as established in each Region. The copies for the Soil Mechanics Bureau may be collected on a weekly basis by the individual supervising the IAST personnel and sent in one mailing.

The results of the tests or sampling information are the only items reported on Form SM-464. For several tests, it is necessary to record raw data and make computations in order to obtain the final results. This will be accomplished by utilizing the normal forms required for these tests (e.g. Form SM-15a, SM-384, SM-417a and SM-418b). Appendix C contains a list of all forms required for this program. The test forms, when used, shall be attached to the IAST personnel's copy of Form SM-464 and filed in the Regional Office in a permanent file.

II. INSTRUCTIONS - FORMS BR-250a, BR-249b OR SM-464

A. BR-250a - Project Samples.

1. Heading

a. PROJECT - print or stamp official project name. Name can be abbreviated if needed.

b. COUNTY - print the county in which project is located.

c. REGION - print the Region number in which the project is located.

d. CONT. NO. - print the Department Contract number.

e. F.A. PROJECT NO. - print the Federal Aid Project number (assigned by FHWA). Leave blank for Non-Federal Aid projects.

f. PROJ. CODE - print the Project Identification number (four digits, decimal, two digits). This can be found in the Construction Contract Status Book or obtained from the EIC.

g. TYPE CODE - print the two digit code indicating the test performed (See Appendix E).

h. INSP. DATE - print the date of the test in digit form. Every date will have six digits (e.g. 070385, for July 3, 1985).

2. Main Body

The main body of the report is broken down into two sections, the Concrete Field Tests and the Miscellaneous Tests. After each of the Concrete Field Tests there are two questions which will be answered yes or no. The "Was Test Procedure Followed" question pertains to whether the project inspector is following the procedure outlined in the appropriate Materials Method for both sampling and testing. If the Materials Method was followed exactly, then the "yes" is circled. If the Materials Method was not exactly followed, then the "no" is circled. If the "no" is circled, note the difference and why. The other questions, "Results Within Variation Limits", is answered by the IAST supervisor after comparing the project inspector's test results and the IAST personnel's test results. If the tests are within the allowable variation, the "yes" is circled. If the tests are not within the allowable variation, the "no" is circled.

For Cylinder and Miscellaneous Tests there is only one question, the "Was Test Procedure Followed" question. If the Materials Method procedure was followed, the "yes" is circled; if not the "no" is circled and note the difference and why.

a. CONCRETE FIELD TESTS

1. ITEM - print item number.

2. CLASS - print concrete class.

3. LOCATION - print location where sample is taken.

4. SLUMP - the inspector's test result is entered in the block next to INSPECTOR TEST and the IAST personnel's test result is entered in the block next to IAST TEST. Slump is reported to two decimal places (e.g. 1.25, 2.50, 4.00).

5. AIR - the inspector's result is entered in the block next to INSPECTOR TEST and the IAST personnel's result is entered in the block next to IAST TEST. Air is reported to the nearest decimal place (e.g. 4.0, 5.3, 8.2).

6. CYLINDERS

CYL. NO. - enter cylinder numbers. These numbers shall be designated by the EIC.

LOCATION - enter location where sample is taken.

b. MISCELLANEOUS TESTS

This area should be used for observing the sampling of any other project material, i.e. tack coat or asphalt emulsions.

1. ITEM - enter the item number of the material sampled.

2. MATERIAL - enter description of material sampled.

3. LOCATION - enter location where sample is taken.

3. Lower Section

a. INSPECTOR - enter name of project personnel performing test.

b. IAST PERSONNEL - enter IAST personnel's name.

c. REVIEWED BY - enter the name of the person reviewing the form. This should be the IAST supervisor.

d. REMARKS - enter any remarks or follow-up actions.

B. BR-249b, Plant Samples

1. Heading

a. Check either project or off project depending on the location of the plant.

b. PLANT - print the name of the company operating the plant.

c. REGION - enter the Region where the plant is located.

d. LOCATION - print the plant address.

e. COUNTY - print the county where the plant is located.

f. CONTRACTS SUPPLIED - print the Department Contract numbers (D250100, etc.) for the projects receiving material on the day of visit.

g. PLANT CODE - print the five digit facility number.

h. TYPE CODE - print the two digit code indicating the test performed (See Appendix E).

i. INSP. DATE - print the date of the test in six digit from (e.g. 070385, July 3, 1985).

2. Main Body

After each of the tests there are two questions that must be answered (only one question for miscellaneous tests). The "Was Test Procedure Followed" question pertains to whether the plant inspector is following the procedure outlined in the appropriate Materials Method for both sampling and testing. If the Materials Method was followed exactly, then the "yes" is circled. If the Materials Method was not followed exactly then the "no" is circled. If the "no" is circled, note the differences and why. The other question, "Results Within Variation Limits" is answered by the

IAST supervisor after comparing the plant inspector's test results and the IAST personnel's test results. If the tests are within the allowable variation, the "yes" is circled. If the tests are not within the allowable variation, the "no" is circled. The allowable variations are shown in Appendix G.

a. BITUMINOUS CONCRETE

1. ITEM - enter item number of material being tested.

2. MIX TYPE - enter mix type being produced.

3. JOB MIX FORMULA - record job mix formula, if applicable.

4. INSPECTORS TEST - enter the inspector's final gradation results. The initial test data and computations should be made using the appropriate forms.

5. IAST TEST - enter the IAST personnel's final gradation results.

b. PORTLAND CEMENT CONCRETE GRADATION

Record the gradation of the coarse aggregate in the first section labeled C.A. Record the fine aggregate in the section labeled F.A.

1. ITEM NO. - enter the item number of the material tested.

2. CLASS - enter the class of concrete being produced.

3. LOCATION - enter the location where the sample is taken. This should be entered for both course and fine aggregate tests.

4. INSPECTORS TEST - enter the inspector's final gradation results. The initial computations should be made using the appropriate forms. This should be done for both the course and fine aggregate.

5. IAST SAMPLE TEST - enter the IAST personnel's final gradation results.

c. MISCELLANEOUS TESTS - This area should be used when sampling any other plant material (i.e., asphalt cement).

1. ITEM - enter item number of material tested.

2. MATERIAL - enter the description of material sampled.

3. LOCATION - enter the location where the sample is taken.

3. Lower Section

a. INSPECTOR - enter name of the plant inspector performing test.

b. IAST PERSONNEL - enter the IAST personnel's name.

c. REVIEWED BY - enter the name of the person reviewing the form. This should be the IAST supervisor.

d. REMARKS - enter any remarks or follow-up actions.

C. SM-464 - Source or Project Samples

1. Heading

a. PROJECT - print or stamp official project name. Name can be abbreviated if needed.

b. COUNTY - print the county in which project is located.

c. REGION - print the Region number in which the project is located.

d. CONTRACT NO. - print the Department Contract number.

e. F.A. PROJECT NO. - print the Federal Aid Project number (assigned by FHWA). Leave blank for Non-Federal Aid project.

f. PROJECT CODE - print the Project Identification Number (four digits, decimal, two digits). This can be found in the Construction Contract Status Book or obtained from the EIC.

g. TYPE CODE - print the type code indicating the test performed (See Appendix E).

h. INSPECTION DATE - print the date of the test in digit form. Every date will have six digits (e.g. 070385, for July 3, 1985).

i. SOURCE - check this box only if material is from the source.

j. PROJECT - check this box only if material is on project.

2. Main Body

The main body of the report is broken down into two (2) sections, the Grain Size Analysis test and the Field Compaction test. With the Grain Size Analysis test there are three (3) questions which will be answered yes or no. The sampling procedure question pertains to whether the project inspector is following the procedure outlined in the appropriate Soils Method for sampling. The test procedure question pertains to whether the project inspector is following the procedure outlined in the appropriate Soils Method for testing. If the Soils Method was followed exactly, then the "yes" is circled. If the Soils Method was not exactly followed, then the "no" is circled. If the "no" is circled, note the difference and why.

The third question, "Results within Variation Limits", is answered by the IAST supervisor after comparing the project inspector's test results and the IAST personnel's test results. If the tests are within the allowable variation shown in Appendix G, the "yes" is circled. If the tests are not within the allowable variation, the "no" is circled.

For the Field Compaction tests there are two questions, the "test procedure" question and the "variation limits" question. These questions have been explained above.

a. GRAIN SIZE ANALYSIS TESTS

1. ITEM NO. - print item number.

2. LOCATION - print location where sample is taken.

3. SIEVE SIZES - use only sieve sizes needed for item number being tested.

4. PROJECT INSPECTOR - record results from inspector on project.

5. IAST PERSONNEL - record results from IAST inspector.

b. FIELD COMPACTION TESTS

1. STM - 6, 9 or 10 (circle one) - one must be circled for the method being used. The same method must be used by the project inspector and IAST inspector.

2. LOCATION - print location where sample is taken.

3. FIELD WET DENSITY - print result obtained from field.

4. WET WEIGHT OF SOIL IN 1/30 MOLD - print result from wet weight of soil (only) in 1/30 mold.

5. PROJECT INSPECTOR - same as above.

6. IAST PERSONNEL - same as above.

3. Lower Section

a. INSPECTOR - enter name of project personnel performing test.

b. IAST PERSONNEL - enter IAST personnel's name.

c. REVIEWED BY - enter the name of the person reviewing the form. This should be the IAST supervisor.

d. REMARKS - enter any remarks or follow-up actions.

III. FOLLOW-UP ACTION

A. Test Procedure

If any discrepancy is noted in the procedure used by the project or plant inspector, the IAST personnel should inform the inspector so that the inspector can perform the test properly. A major deviation in the test procedure will require the test procedure to be repeated. The test will only be repeated after the correct procedure has been reviewed. Any major discrepancies and the follow-up actions shall be documented in the Remarks section by the IAST personnel.

B. Results Comparisons

The results of the Inspector's tests and IAST personnel's tests will be compared by the IAST supervisor to see if the results are within the acceptable variation range shown in Appendix C. If the tests are not within the acceptable range, the IAST supervisor should investigate to see if there is an equipment problem or testing problem. The IAST supervisor should indicate the conclusions in the Remarks section of the BR-249b, BR-250a or SM-464.

APPENDIX A

EQUIPMENT LIST

ITEM	QUANTITY
Sieves:	
8" diameter sieves, full height	
Cover	1
4"	1
3"	1
2"	1
1 1/2"	1
1"	1
3/4"	1
1/2"	1
1/4"	2
1/8"	1
No. 10	1
No. 20	1
No. 40	2
No. 80	1
No. 100	1
No. 200	2
Pan	1
8" diameter sieves, half height	
1/4"	1
3/8"	1
No. 4	1
No. 8	1
No. 16	1
No. 30	1
No. 50	1
No. 100	1
No. 200	1
Pan	1
18" X 26" Gilson screen trays	
Rack	1
4"	1
3"	1
2 1/2"	1
2"	1
1 1/2"	1
1"	1
3/4"	1
1/2"	1
3/8"	1

APPENDIX B

INDEPENDENT ASSURANCE SAMPLING AND TESTING

FREQUENCY GUIDE FOR SAMPLING

BITUMINOUS MIXES

LOCATION SAMPLED	BITUMINOUS MATERIALS	AGGREGATES
PLANT	Asphalt Cement Sample 1/150,000 gal.	Aggregate Gradation 1/10,000 T.
CONSTRUCTION SITE	Asphalt Emulsion Sample 1/75,000 gal.	

PORTLAND CEMENT CONCRETE

	STRUCTURAL	PAVEMENT
PLANT	Aggregate Gradation 1/1000 c.y.	Aggregate Gradation 1/10,000 c.y.
	STRUCTURAL CONCRETE	PAVEMENT CONCRETE
CONSTRUCTION SITE	Cylinders Air Content Slump 1/1000 c.y.	Air Content Slump 1/10,000 c.y.

GRANULAR MATERIAL

	GRADATION	DENSITY
SOURCE	Two stockpiles/year for stockpiled material	N/A
CONSTRUCTION SITE	Two/project/year for non-stockpiled material	Two/project/year

APPENDIX C

FORMS LIST

NUMBER	TITLE
BR-161	Hot Bin Analysis
BR-170	Bitumen or Mix Sample
BR-240	Sample and Acceptance Transmittal
BR-249b	Progress Record Sampling Report, Plant
BR-250a	Progress Record Sampling Report, Project
BR-300	Concrete Cylinder Report
BR-317	Concrete Aggregate Tests
SM-15a	Sieve Analysis Data (STM-2)
SM-384a	Compaction Control Data Sheet (STM-6)
SM-417b	Field Compaction Sheet - Sand Cone or Volumeter Apparatus (STM-9)
SM-418b	Field Compaction Sheet - Nuclear Direct Transmission (STM-10)
SM-464	Independent Assurance Sampling and Testing Report, Source or Project

APPENDIX D

MAILING ADDRESSES

Technical Services Division, Building 7A
New York State Department of Transportation
1220 Washington Avenue
Albany, New York 12232

Materials Bureau, Building 7A
New York State Department of Transportation
1220 Washington Avenue
Albany, New York 12232

Soil Mechanics Bureau, Building 7
New York State Department of Transportation
1220 Washington Avenue
Albany, New York 12232

APPENDIX E

INDEPENDENT ASSURANCE SAMPLING AND TESTING

TYPE CODES

1) Materials

PLANT CODES:

Type Code	Test
11	Type 1, Dense Base
12	Type 2, Open Base
13	Type 3, Dense Binder
14	Type 5, Shim
15	Type 6, Top
16	Type 6F, Top, High Friction
17	Type 7, Top
18	Type 7F, Top, High Friction
19	Type 8, Top
20	Type 8F, Top, High Friction
21	Type 9F, Open Top
25	Fine Aggregate, #1 Stone
26	Fine Aggregate, #1 and #2 Stone

PROJECT CODES:

Type Code	Test
11	Slump and Air Class A
12	Slump and Air Class C
13	Slump and Air Class D
14	Slump and Air Class E
15	Slump and Air Class F
16	Slump and Air Class G
17	Slump and Air Class H
18	Slump and Air Class I
19	Slump and Air Class J
20	High Density
21	Latex

APPENDIX G

GUIDELINE FOR ACCEPTABLE VARIATION

TEST	ACCEPTABLE VARIATION
Slump	±1/2"
Air	±.5%
Gradation and Grain Size Analysis	
Coarse Aggregate (Sieve Sizes ≥ No. 40)	±5%
Fine Aggregate (Sieve Sizes < No. 40)	±2%
Field Compaction Test	
Field Wet Density	< 5 lb.

2) Soil Mechanics

SOURCE CODES:

Type Code	Item
31	304 Subbase Course, Type 1
32	304 Subbase Course, Type 2
33	304 Subbase Course, Type 3
34	304 Subbase Course, Type 4
35	605 Underdrain Filter, Type I
36	605 Underdrain Filter, Type II
37	Special - Main Office or Region

PROJECT CODES:

Type Code	Item
41	203.01 Unclassified Excavation and Embankment
42	203.03 Embankment In-Place
43	203.05 Select Borrow
44	203.06 Select Fill
45	203.07 Select Granular Fill
46	203.20 Select Granular Subgrade
47	203.21 Select Structure Fill
48	304 Subbase Course Type 3
49	Special - Main Office or Region

F-1

3R 250a (1/87)

NEW YORK STATE DEPARTMENT OF TRANSPORTATION

INDEPENDENT ASSURANCE SAMPLING & TESTING REPORT

PROJECT

CONTROL NUMBER 00005

PROJECT Northern State Parkway COUNTY Nassau REGION 10

CONTRACT NO. D 25000 F.A. PROJ. NO. BRS-5218(120)

PROJ. CODE 3333.22 | TYPE CODE 17 | INSP. DATE 07 13 86

CONCRETE FIELD TESTS

ITEM	CLASS	LOCATION
555.0403	H	Bridge Deck

SLUMP				AIR			
INSPECTORS TEST	3.50	WAS TEST PROCEDURE FOLLOWED	(YES) NO	INSPECTORS TEST	7.1	WAS TEST PROCEDURE FOLLOWED	(YES) NO
IAST TEST	3.25	RESULTS WITHIN VARIATION LIMITS	(YES) NO	IAST TEST	7.2	RESULTS WITHIN VARIATION LIMITS	(YES) NO

CYLINDERS

CYL. NO.	LOCATION		
6K	Bridge Deck	WAS TEST PROCEDURE FOLLOWED	(YES) NO
6L			

MISCELLANEOUS TESTS

ITEM	MATERIAL	LOCATION			
			WAS TEST PROCEDURE FOLLOWED	YES	NO
			WAS TEST PROCEDURE FOLLOWED	YES	NO
			WAS TEST PROCEDURE FOLLOWED	YES	NO

INSPECTOR R. Smith

IAST PERSONEL W. Brown

REVIEWED BY A. PHILIPS

REMARKS

DISTRIBUTION: WHITE - MATERIALS BUREAU; BLUE - REGIONAL DIRECTOR; GREEN - IAST; YELLOW - PROJECT

F-2

GR 249b (1/87)

NEW YORK STATE DEPARTMENT OF TRANSPORTATION

INDEPENDENT ASSURANCE SAMPLING & TESTING REPORT

PLANT

CONTROL NUMBER 00005

PLANT	PLANT GENERAL CRUSHED STONE	REGION 3	
PROJECT ☐	LOCATION POLKVILLE	COUNTY CORTLAND	
OFF PROJECT ☑	CONTRACTS SUPPLIED D251000, D252200		

PLANT CODE	TYPE CODE	INSP. DATE
10053	13	091186

BITUMINOUS CONCRETE - AGGREGATE GRADATION

5% ← 2%

ITEM	MIX TYPE						JOB MIX FORMULA				
SIEVE SIZE	2"	1 1/2"	1"	1/2"	1/4"	1/8"	#20	#40	#80	#200	WAS TEST PROCEDURE FOLLOWED: (YES) NO
INSPECTORS TEST		100	100	83	64	49	20	13	7	3	RESULTS WITHIN VARIATION LIMITS: (YES) NO
IAST TEST		100	100	81	60	47	22	15	9	3	

PORTLAND CEMENT CONCRETE GRADATION

ITEM NO.	CLASS			
C.A.	LOCATION			
SIEVE SIZE	1 1/2"	1"	1/2"	1/4"
INSPECTORS TEST				
IAST TEST				

WAS TEST PROCEDURE FOLLOWED: YES NO

RESULTS WITHIN VARIATION LIMITS: YES NO

F.A.	LOCATION							
SIEVE SIZE	3/8"	#4	#8	#16	#30	#50	#100	#200
INSPECTORS TEST								
IAST TEST								

WAS TEST PROCEDURE FOLLOWED: YES NO

RESULTS WITHIN VARIATION LIMITS: YES NO

ITEM	MATERIAL	LOCATION

WAS TEST PROCEDURE FOLLOWED: YES NO

WAS TEST PROCEDURE FOLLOWED: YES NO

INSPECTOR John Jones	REMARKS
IAST PERSONNEL Sam Smith	
REVIEWED BY T. Wall	

DISTRIBUTION: WHITE - MATERIALS BUREAU; BLUE - REGIONAL DIRECTOR; GREEN - IAST; YELLOW - PLANT

F-3

NEW YORK STATE DEPARTMENT OF TRANSPORTATION

INDEPENDENT ASSURANCE SAMPLING & TESTING REPORT

SM 464 (1/87) SOURCE OR PROJECT CONTROL NUMBER 00002

PROJECT STE RTE 17		COUNTY CATT	REGION 5
CONTRACT NO. D 250369		F.A. PROJ. NO. BRF-218(105)	

PROJ. CODE 5119.01	TYPE CODE 42	INSP. DATE 050786
SOURCE	PROJECT Y	

GRAIN SIZE ANALYSIS

ITEM NO.	LOCATION													
SIEVE SIZE	4"	3"	2"	1 1/2"	1"	3/4"	1/2"	1/4"	#10	#20	#40	#60	#100	#200
INSPECTORS TEST														
IAST TEST														

WAS TEST PROCEDURE FOLLOWED: YES NO RESULTS WITHIN VARIATION LIMITS: YES NO

WAS SAMPLING PROCEDURE FOLLOWED: YES NO

FIELD COMPACTION TEST STM-6, (9) OR 10 (CIRCLE ONE)

LOCATION

TEST	FIELD WET DENSITY	WET WEIGHT OF SOIL IN 1/30 CUBIC FOOT MOLD	PERCENT OF STANDARD* PROCTOR MAX. DENSITY
PROJECT INSPECTOR	118.2	3.99	97.2
IAST PERSONNEL	121.8	3.81	101.9

WAS TEST PROCEDURE FOLLOWED: (YES) NO RESULTS WITHIN VARIATION LIMITS: (YES) NO

*FOR STM-6 VALUE WILL BE APPROXIMATE, FOR STM-9 AND 10 VALUE WILL BE ACTUAL

PROJECT INSPECTOR W. White	REMARKS
IAST PERSONEL J. Smith	
REVIEWED BY R. Jones	

DISTRIBUTION: WHITE - SOIL MECHANICS BUREAU; BLUE - REGIONAL DIRECTOR; GREEN - IAST PERSONNEL; YELLOW - NYSDOT ENGINEER - IN - CHARGE (ETC.)

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LRI